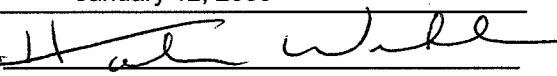Doc Code: AP.PRE.REQ

PRE-APPEAL BRIEF REQUEST FOR REVIEW	Docket Number (Optional)
	40062.0128USC1/167378.02

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]	Application Number	Filed
on _____ January 12, 2009 _____	10/830,164	April 21, 2004
Signature	First Named Inventor	
	Srikanth R. Avadhanam	
Typed or printed name Halina Wohl	Art Unit	Examiner
	2166	Pham, Khanh B.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
　　　　Note: No more than five (5) pages may be provided.

I am the

☐　applicant/inventor.

☐　assignee of record of the entire interest.
　　See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
　　(Form PTO/SB/96)

☑　attorney or agent of record. 36,408
　　Registration number

☐　attorney or agent acting under 37 CFR 1.34.

　　Registration number if acting under 37 CFR 1.34 _____

_____
Signature
Gregory D. Leibold
_____
Typed or printed name

303-357-1642
_____
Telephone number

January 12, 2009
_____
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

☑　*Total of ___1___ forms are submitted.

S/N 10/830,164

<u>IN THE UNITED STATES PATENT AND TRADEMARK OFFICE</u>

Applicant: Avadhanam et al.   Examiner: Khanh B. Pham

Serial No.: 10/830,164   Group Art Unit: 2166

Filed: April 21, 2004   Docket No.:   MS 167378.02 / 40062.128USC1

Title: METHOD AND SYSTEM FOR CREATING A DATABASE TABLE INDEX
USING MULTIPLE PROCESSING UNITS

> <u>CERTIFICATE UNDER 37 CFR 1.8:</u>
>
> I hereby certify that this correspondence is being transmitted via EFS-Web to the U.S. Patent Office on January 12, 2009.
>
> By: _____
> Name: Halina Wohl

**PRE-APPEAL BRIEF REQUEST FOR REVIEW
SUPPORTING STATEMENT**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir or Madam:

In response to the Final Office Action mailed on October 10, 2008, Applicants concurrently herewith have filed a Notice of Appeal and Pre-Appeal Brief Request for Review. The following remarks are filed in support of the attached Pre-Appeal Brief Request for Review.

I.   <u>Background</u>

In the October 10, 2008 Final Office Action ("Office Action"), claims 1-26 were rejected under 35 USC § 103(a) as being obvious over Gupta et al. (U.S. Patent No. 6,438,562), in view of Blank et al. (U.S. Patent No. 5,842,208), hereinafter referred to as "Gupta" and "Blank." During prosecution of this application, Applicants have filed five amendments and interviewed the Examiner in person. For the past three office actions, the Examiner has maintained a rejection under 35 U.S.C. § 103(a) based on the same cited references. Applicants submit that

the Examiner has failed to state a *prima facie* case for rejecting the independent claims, and all rejections should be withdrawn and the application allowed in its current form.

II. The Cited Gupta and Blank References Do Not, Alone or in Combination, Make the Currently Pending Claims Obvious.

Gupta relates to "a method, system, and product for coordinating parallel update for a global index of and indexed table." (Gupta, Abstract). "Techniques for maintaining a global index of a table during parallel data manipulations operations involve a coordinator process, data manipulation slaves and index update slaves. The coordinator process *distributes* data manipulation operations among a plurality of data manipulation slaves." (*Id.*, Col. 8, ll. 1-6) (emphasis added). Gupta teaches sorting maintenance records and determining a range by reading key values from the sorted maintenance records. (*See id.*, Col. 15, ll. 35-67). A coordinator process then uses these ranges in distributing records to multiple slave processes. (*See id.*, col. 14, ll. 9-14). The slave processes use the maintenance records distributed by the coordinator process to update a global index. (*See id.*, Col. 14, ll. 16-20).

Gupta fails to teach or suggest at least <u>accessing the table records in parallel, wherein each processing unit accesses all of the records in the table of records</u>. As noted above, Gupta does the opposite. First, Gupta determines a set of ranges of records by reading key values from a sorted table. After determining a set of ranges, Gupta teaches distributing the records, based upon the ranges they fall into, among multiple slave processes. The slave processes then perform maintenance *only* on the records which they receive. Indeed, the Office Action ("Office Action") acknowledges that: "Gupta does not specifically teach . . . 'each processing unit accesses all of the records in the table of records.'" (Office Action, p. 4.)

Blank does not compensate for this deficiency. Blank relates to a "recover/build index system [that] builds an index for a file by scanning *partitions* of the file in parallel to retrieve key/rid values. The recover/build index system then sorts the scanned key/rid values for each partition in parallel." (Blank, Col. 1, ll. 37-41, emphasis added.) After the data is sorted in parallel, a "merge program merges the sort streams received from the sort programs to create a merge stream. The merge program accepts the sort stream from two or more sort programs. Blank then performs index creation on the single data stream.

The Office Action asserts that Blank, teaches <u>accessing the table records in parallel,</u> <u>wherein each processing unit accesses all of the records in the table of records</u>, as recited in claim 1. Applicants respectfully disagree. The Office Action cites to a broad statement in the "Background of the Invention" section of Blank for support. In particular, the Office Action contends:

> Applicant argued that Gupta and Blank, as combined, does not teach or suggest "each processing unit accesses all of the records in the table of records." On the contrary, Blank teaches this limitation at Col. 1 lines 17-24 which states:
>
>> "The process involves scanning all the records in the file, extracting a key value and record identifier (rid) value from each of the records, sorting all of the key/rid values, and then building the index from the sorted key/rid value"

Office Action, p. 18.

The cited section, however, simply does not meet the limitation of <u>accessing the table</u> <u>records in parallel, wherein each processing unit accesses all of the records in the table of</u> <u>records</u>, as recited in claim 1. Because the recited section of Blank is part of the "Background of the Invention" section, it comprises only a short, general description of the problem Blank is attempting to solve. Specifically, Blank addresses the issue of efficiency in creating an index for a large database file: "Typically, the scanning, sorting, and index build steps are performed serially, which can be time consuming in the case of a large database file." (Blank, Col. 1, ll. 22-24.) There is absolutely no discussion of how this system, described by Blank as prior art to the Blank patent, accomplishes "scanning all the records in the file."

By contrast, claim 1 requires "<u>a computing environment having a plurality of processing</u> <u>units . . . accessing the table records in parallel, wherein each processing unit accesses all of the</u> <u>records in the table of records</u>." This is not taught by the Background section of Blank. In fact, given that the system described in the Background section of Blank is described as operating "serially," it is unlikely that the system <u>accesses the table records in parallel</u>, let alone that <u>each</u> <u>processing unit accesses all of the records in the table of records</u>.

Moreover, the actual system disclosed in the figures and detailed description of Blank also does not meet at least this limitation of claim 1. Indeed, while in Blank all of the records are scanned, it does not necessarily follow that <u>each</u> of the scan programs in Blank scan <u>all</u> of the

records. Rather, Blank teaches that each scan program operates on a single partition and that, operating together in parallel, the scan programs of Blank scan all of the records. This is clearly demonstrated in Figure 1 of Blank, which shows that each partition 120 has its own scan process 108 and sort process 110. In discussing Figure 1, Blank states that "*each of the partitions* 120 is scanned in parallel by the scan programs 108 . . . ." (Blank, col. 2, ll. 25-26.) Blank further teaches that each processing unit accesses only a portion of the table (i.e., each processing unit scans a *single partition*):

> [t]he scan programs **108** executing in parallel extract key values (of a particular key) and record identifiers (rids) or pointers from the partitions **120** to create a key/rid or scan stream *for each partition* **112**. (Blank, col. 2, l. 64 – col. 3, l.1, emphasis added.)

The scan programs in Blank are assigned only a particular partition of the table, not <u>all of the records in the table of records</u>. Thus, Blank fails to teach or suggest <u>accessing the table records in parallel, wherein each processing unit accesses all of the records in the table of records</u>.

For at least similar reasons, both Gupta and Blank also fail to teach or suggest the other independent claims. For example, independent claim 14 recites, *inter alia*, <u>a plurality of processing units that respectively accesses the database table in parallel, wherein each of the respective processing units accesses all of the records in the table of records</u>. Independent claim 18 recites, *inter alia*, <u>wherein at least one partition is dedicated to a first processing unit for index creation and at least one other partition is dedicated a second processing unit for index creation; the first processing unit accessing every record in a table record</u>. Similarly, independent claim 20 recites, *inter alia*, <u>accessing the table records in parallel, wherein each processing unit accesses all of the records in the table of records</u>. Finally, independent claim 24 recites, *inter alia*, <u>an access module that accesses all of the data records from the table of data records</u>.

For at least the forgoing reasons, neither Gupta nor Blank, alone or in combination, teach all of the limitations of independent claims 1, 14, 18, 20, and 24 and therefore cannot anticipate or make obvious the present invention as claimed. Claims 1, 14, 18, 20, and 24 are allowable over the references of record and should be allowed. All other claims, *i.e.*, claims 2-13, 15-17, 19, 21-23, and 25-26 depend from one of the allowable independent claims and are, thus, also allowable over the cited references.
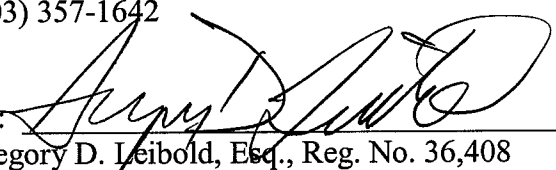
III.   Conclusion

Accordingly, Applicants respectfully request that the present application be withdrawn from appeal and allowed in its current form. It is not believed that any fees are due with this paper; however, please charge any fees not paid with this paper, or credit any overpayment to, deposit account 13-2725.

Respectfully submitted,

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27488
PATENT TRADEMARK OFFICE

By: _____
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Attorney for Applicant

Date: January 12, 2009